NECK PAIN AMONG COMPUTER USERS

Dr. Justin Jeya Amutha*| Dr. Lordlin**

** Associate Professor, Smt. Nagarathnamma College of Nursing, Bangalore, India.*

*** Principal, Bethel College of Physiotherapy, Bangaluru, Karnataka, India.*

ABSTRACT

Neck pain is the sensation of discomfort in the neck area. Neck pain can result from disorders of any of the structures in the neck, including the cervical vertebrae and inter-vertebral discs, nerves, muscles, blood vessels, oesophagus, larynx, trachea, lymphatic organs, thyroid gland, or parathyroid glands. Work associated neck pain is a common problem for office computer workers, especially since an upward trend for computers use can be seen each year. Today, a large number of people use computers for work and recreation, taking up a great deal of their time each day (Green, 2012).

Key words: *Neck pain, Computer, Computer users, Lifestyle, Health*

About Authors

Author Dr. Justin Jeya Amutha, is working as Associate Professor in Smt. Nagarathnamma College of Nursing, Bangalore, India. She has published articles in many National and International Journals.

Author Dr. Lordlin is Principal in Bethel College of physiotherapy in Bangaluru. He has attended and organised various National and International conferences and given extension lectures.

INTRODUCTION

Neck pain is experienced from the base of the skull (occiput) to the upper part of the back and extending laterally to the outer and superior bounds of the shoulder blade (scapula). Neck pain arises from numerous different conditions (www.medicinenet.com). Neck pain is a common problem, with two-thirds of the computer working population having neck pain at some point in their lives. Neck pain may arise due to muscular tightness in both the neck and upper back, (or) pinching of the nerves emanating from the cervical vertebrae (www.wikipedia.org).

Neck pain is also common in general population. Reports on prevalence of neck pain are even higher in computer workers than in the general community, reaching levels as high as 50 to 60%. Neck pain can impact on the ability to perform normal daily activities and the resultant treatment costs and work loss contributes to a substantial economic burden for both individual and society [Eriksen, W., (2018)].

Neck pain affects approximately 67% of individuals at some point of time in their life. Regarding the 12-month prevalence of neck pain, previous research studies have reported it to range between 30% and 50%. It is not life threatening, but it can cause a sense of being unwell and substantial level of disability due to pain and neck stiffness. This disability can affect the physical functioning of the patients, leading to sickness behaviour and activity restrictions. In the general population, the 12-month prevalence of activity-limiting pain has been reported to vary from 1.7% to 11.5%.

Musculoskeletal disorders in general have become increasingly common worldwide during the past decades. It is a common cause of work-related disability among computer workers with substantial financial consequences due to workers' compensation and medical expenses (Anderson, 2016).

Sitting at a desk and tapping on a computer all day is not what our bodies are designed to do. Large numbers of patients suffer from complaints of the arm, neck and or shoulder .This is a musculoskeletal condition that is not caused by acute trauma or any systemic disease but just by poor sitting posture. Interestingly, computer workers more often experience pain in the neck and shoulders than the hands and forearms. This is unexpected as the muscles used to type and control the mouse are predominantly in the hands and forearms [John Pillinger. (2009)].

Bad posture can cause neck pain. Ligaments are over-stretched, muscles become tired and neck joints and nerves are put under pressure. Slouching the shoulders with your head pushed forward, sleeping with head in an awkward position or working with your head down for long periods, will all tend to cause or worsen neck pain (The Indian Association of Physiotherapists, 1995).

A common cause of neck pain is muscle strain or tension. Usually, everyday activities are to blame. Such activities include bending over a desk for hours, having poor posture while watching TV or reading, placing your computer monitor too high or too low, sleeping in an uncomfortable position, or twisting and turning the neck in a jarring manner while exercising (Medline plus. com).

Working in a sitting position will lead to a continuous static load on the neck muscles, especially if the design of the workplace is not suitable for the worker. Static loading of the neck muscles will induce biomechanical strain, an increased muscle tone which may in the long term lead to the development of neck pain (Ariens et al., 2001).

Work-related neck pain is becoming more common these days with jobs becoming more computer-based. Jobs that may lead to chronic neck pain are those that require repetitive work, typically on computer keyboards. These jobs are primarily in administrative offices, post offices, and banks. In these positions, there is overuse and misuse of the neck and shoulder muscles (Patrick, 2012). Neck pain may originate from any of the pain sensitive structures in the neck including the vertebral bones, ligaments (anterior and posterior longitudinal ligaments) the nerve roots, the particular facets and capsules, muscles, and dura mater. Other structures of the neck region, visceral and somatic structures are encountered (Delisa et al., 2018).

THERAPIES FOR BACK PAIN

There are lots of therapies available for work related neck pain (WRNP). To quote a few —

- Restriction of movement
- Application of heat or cold
- Exercise
- Medication
- surgery
- Ergonomic teaching (www.ccohs.ca)

Since the advent of the computer, office workers have become less active. Many people work for hours craning their heads forward to look at the computer screen and become so engrossed in their work that they forget to move or change position (www.physio.com2004)

According to different studies published in the Spine journal, individuals who will have neck pain sometime in their lives range from 22 per cent to 70 per cent. Increasing incidence of neck pain has been reported and one of the most common reasons for this is faulty posture. Prevalence of neck pain increases with age and is most common in women in their fifties. Patients with neck pain frequently visit physical therapy clinics. Mechanical neck pain secondary to faulty postures make up approximately 15 per cent of a physical therapy (The Hindu, 2007). Overall, 45% of working men had at least one attack of stiff neck, 23% at least one attack of brachial neuralgia, and 51% had both these symptoms. The frequency of cervical symptoms almost doubles from age 25 to 45 (Delisa et al. 1988). The prevalence of neck pain with or without arm pain is approximately 13% in females and 9% in males in the general population.

One large study of computer workers aged 23 to 36 years found that almost half of them (46%) suffered from neck pain and nearly 60% complained of chronic back pain that was likely associated with poor postures. Furthermore, greater than 1 in 5 of these persons complained of stress (21%) and headaches (23%) directly related to their work at computers (Kjellaman, 2002). The report, appearing in August 2010 edition of RSNA News from the Radiological Society of North America, noted that the most frequent complaints were neck pain (43%), back pain (39%), shoulder pain (32%), headaches (32%), and wrist pain (7%). Nearly all respondents (96%) were using 2 or 3 computer monitors at their workstations. As recently reported in the Times of India (2011), physiotherapist Aalap studied 970 computer workers (employees of information technology, or IT, companies) aged 23 to 36 years. He found that almost half (46%) suffered from neck pain and nearly 60% complained of back pain. Furthermore, greater than 1 in 5 complained of stress (21%) and regular headaches (23%) directly related to their work at computers. (Jouda, 2006)

Salih, (2003) conducted a study on antecedents of work related musculoskeletal disorders in software professionals in Saveetha University Chennai. Adult musculoskeletal disorders (MSD) such as neck and low back pain have been widely reported as being of significant health and economic concern due to increased globalisation and industrial advancements.

Work related neck pain has significant negative effects (Jouda, 2006) —

- Absenteeism
- Productivity shortages
- Poor quality of work
- Poor union relation
- Mental distress
- Problem in employer-employee relationship.
- Problem in caring for their own family
- Reduced ability to meet customer

Musculoskeletal disorders in general population have become increasingly common worldwide during the past decades. It is a common cause of work related disability among workers with substantial financial consequences due to workers' compensation and medical expenses (Anderson, 2016).

Neck pain is found to be the most prevalent pain. Posture, body fatigue, hours of computer usage and lack of ergonomic knowledge etc are found to be causal factors determining work related MSD. A total of 355 software professionals were studied and the research draws conclusion that it is important to have awareness about the changing world and the increased need for ergonomics interventions in today's workplaces.

Lot of therapies and treatments are available for work related neck pain. Previous researchers [Garabet et al., (2012), Bleecker et al. (2011), Zebis et al. (2011) and Hansen et al. (2010)] have proved that neck exercises and ergonomic teaching are effective on reducing neck pain and improving functional ability.

Due to Technological advancement there is an increased use of computers which results in work related neck pain. But the people are unaware that the improper working environment is the reason for that pain. So the nurses play a major role in improving health status of people with work related neck pain. Prevention must aim at eliminating the repetitiveness of the work by proper job design. Where this is not possible, preventive strategies such as good workplace layout, tool and equipment design, and proper work practices should be considered.

CONCLUSION

Early recognition of these disorders is very important because medical treatments are unlikely to be effective once these injuries become longstanding. In order to improve their health and appropriate treatment of neck pain, computer workers are to be trained to do exercises in their work settings. Computer workers should technically be competent and responsible for promoting their own health and improve their quality of life.

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